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APPLICANT : TOKAI CARBON CO LTD;

INVENTOR : SUGIHARA TAKAOMI;

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TITLE : FORMATION OF CERAMIC FILM

ABSTRACT : PURPOSE: To provide a method for forming a ceramic film in which substances of the same kind or different kinds can be formed on the surface of a substrate at a uniform and high film forming rate.

CONSTITUTION: In this method for forming a ceramic film in such a manner that a gaseous raw material is fed to a heated reaction furnace to form fine grains by a vapor phase reaction, the formed fine grains are deposited on the substrate by thermal migration based on the temp. gradient with the substrate held to a temp. lower than that of the vapor phase and at which CVD reaction occurs, and deposited fine grains are grown by the intergranular CVD reaction of an unreacted gaseous starting material, a reaction furnace is locally heated to a high temp. by plural heaters in which the control of the temp. is capable independently for each prescribed region of the reaction furnace. The temp. gradient between the vapor phase and substrate is controlled, and the rate of the thermal migration is controlled, by which the formed film can be uniformized.

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